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XLV. *The Copy of a Letter from John Ellis, Esq; F. R. S. to Mr. William Aiton, botanic Gardener to her Royal Highness the Princess Dowager of Wales, at Kew, on a new Species of Illicium Linnæi, or Starry Aniseed Tree, lately discovered in West Florida.*

S I R,

Read Dec. 13,
1770.

YOUR extensive knowledge in botany, and great skill in the cultivation of the rarest exotic plants from all parts of the world in the celebrated botanic garden of her royal highness the princess dowager of Wales at Kew, will I hope, apologize for me to the Royal Society for the liberty I take in laying this letter, which I address to you, before them; especially as most of that illustrious body, who have made that agreeable science their study, are fully convinced of the truth of it, by often having the pleasure of seeing that most noble and truly princely collection, which is so happily placed under your care.

I confess myself particularly obliged by your skill and attention in raising not only the oak acorns, which were put into your hands by the Royal Society, after they had been preserved by me a whole
season

season in wax ; but also for the care you have taken in raising one of the first tea-plants that has been produced from seed in this kingdom ; especially as it came to me in such a situation, that it could scarcely be expected to vegetate.

You have further shewed your skill in raising many of the starry aniseed trees from West Florida after they had been confined in a box under the ship's decks for near four months, a voyage near as long as from St. Helena, or even the Cape of Good Hope.

I shall now proceed to give you a history of this curious tree, both as a native of Japan, China, and other parts of the East, as well as both the Floridas in North America.

We meet with an account of the Eastern one, together with a figure of it, taken from Clusius, in Parkinson's Theatre of Plants, *p.* 1569. where he observes, that some branches of it, with the husks and seeds only, without leaves or blossoms, were brought into England by Sir Thomas Cavendish, in queen Elizabeth's time, from the Philippine Islands, where he met with it in his voyage round the world. These branches were given to Mr. Morgan, the queen's apothecary, and to Mr. James Garrat, of whom Clusius received them.

Monfieur Geoffroy, in his *Materia Medica*, translated in 1736 by Dr. G. Douglass, *p.* 322. calls it *Anisum Sinense*, *Semen Badian*, & *Fructus Stellatus*, and says, it is highly esteemed in China, and all over the East. That it is used to cure any bad taste in the mouth, as a preservative against the effects of bad air, and also for the stone and gravel. The Indians
likewise

likewise steep this fruit in water, and afterwards ferment the infusion, and thus make a vinous liquor: that the Dutch in the East-Indies, as well as the natives, mix this fruit with their tea and sherbet.

Kæmpfer in his *Amœnitates Exoticæ*, p. 880. calls it *Somo*, or *Skimmi*, and has given us a very good figure of a branch of it, with the leaves, flowers, and fruit. He found it in Japan, and says that the Japanese and Chinese esteem it a sacred tree, that they offer it to their idols, and burn the bark of it, as a perfume, on their altars; and lay the branches upon the graves of the dead, as an offering to the ghosts of their pious departed friends; and that the public watchmen use the powder of this aromatic bark strewed in small winding groves, or little channels, on some ashes in a box secured from the weather, for the following purpose. This powder being lighted at one end, burns slowly on, and being come to certain marked distances, they strike a bell, and by means of this time-keeper, proclaim the hours of the night to the public. And lastly, that it has the remarkable property of rendring the poison of the bladder fish (*Tetraodon Ocellatus* of Linn. *Syst. of Nature*, p. 333.) more virulent, as many have experienced, that have used violent means to destroy themselves.

We are indebted for the first discovery of this curious American tree to a negro servant of William Clifton, Esq; chief justice of West Florida, who was sent to collect specimens of all the rarer plants by his master, at my request; and in April, 1765, he met with this curious tree growing in a swamp near the town of Pensacola; the specimens I received in July following.

After

After this, in the latter end of January, 1766, Mr. John Bartram, the king's botanist for the Floridas, discovered it on the banks of the river St. John, in East Florida, as appears from his description of it, and the drawing of a seed-vessel, with some of the leaves, which he sent to our late worthy member Peter Collinson, Esq; who was so kind as to communicate them to me. Mr. Bartram's description of it, as it appears in his journal up the river St. John's, published by Dr. Stork, in his account of East Florida, is as follows:

" Near here my son found a lovely sweet tree,
 " with leaves like the sweet bay, which smelled like
 " saffraas, and produces a very strange kind of seed-
 " pop; but all the seed was shed, *the severe frost*
 " had not hurt it, some of them grew near twenty
 " feet high, a charming bright evergreen-aromatic."

This observation of Mr. Bartram, relating to its bearing a severe frost, may afford us a useful hint in the cultivation of this tree, especially as I am convinced, from repeated accounts of the weather in West Florida; that the frost is much more intense there, from whence those plants, which you now have in vigour, were brought, than in East-Florida; so that the experiment is well worth making with one of them, to see how far it will stand the severity of our winters. Should it succeed, it would be a very great acquisition to our gardeners, and be highly ornamental to our plantations of evergreens.

The medicinal properties of this tree are certainly worth enquiring into. The leaves afford a most agreeable bitter. A sprig of it set to putrify in a phial
 of

of water, the bark soon became full of a clear mucilage. The young blossoms put into water with a small quantity of oil of tartar *per deliquium* from a dark reddish color, became a light brown; but from the same proportion of oil of vitriol in water, they turned to a fine carmine color, which stained the paper of a fine red. This points out its astringent quality.

Before I come to the botanical characters of our Florida *Illicium*, I must observe, that it appears to me to be a *different species* from the oriental one.

The seed vessels from China, which are to be seen in collections of the *Materia Medica*, especially among foreigners, smell very disagreeably of aniseed: our Florida seed vessel is agreeably aromatic, as are the leaves and young branches. The flower, according to Kæmpfer, is of a yellowish white, and looks at a distance like a *Narcissus*: ours is of a dark red color.

Kæmpfer reckons the number of petals sixteen, and the rays or seed-vessels eight: the number of petals in ours is from twenty-one to twenty-seven, and the seed-vessels twelve or thirteen that ripen. In respect to the form and growth of the tree, they are much the same; for instance, they both grow to the size of a cherry-tree; their leaves are of an oblong oval shape, pointed at both ends, fleshy, with few veins, growing alternately, and in tufts at the ends of the small branches.

Dr. Linnæus, who takes his characters of the *Illicium Anisatum* (Gen. Plant. p. 244.) from Kæmpfer, places it among the *Dodecandria Polygynia*. But I am persuaded you will agree with me, that from
the

the following characters, ours must be of the Polyandria Polygynia, and should stand next to the *Magnolia*.

Characters of the **ILLICIUM FLORIDANUM**,
Or **FLORIDA STARRY ANISEED TREE**.

CALYX. The perianthium, or flower-cup, consists commonly of five little membranaceous and colored leaves, that soon fall off; they are of a concave-oblong oval form, pointed at the ends. Sometimes we meet with only four little leaves, sometimes six, in the flower-cup. Kæmpfer observed four in his.

COROLLA. The flower consists of many petals (from twenty-one to twenty-seven) which are lanceolated: these are of three sizes, and equal numbers in each circle, the outward ones are long (about an inch) concave, obtuse, and spreading open. The next are a little shorter and narrower; and the innermost are still shorter, much narrower, and very sharp pointed; but are not nectaria, as Dr. Linnæus supposes.

STAMINA. The filaments are many, (about thirty) very short and flat, placed over one another, surrounding the germina, or embryo seed vessels. These support as many antheræ, or summits, which are erect; oblong, and emarginated, or having a small indenture at top, with a cell on each side full of farina, of a globular form when they are magnified.

PISTILLUM, or female organ. The germina, or embryo seed-vessels, are twenty, or more, in number, placed in a circular order above the receptacle of the flower; they are compressed, erect, and ending in so many sharp pointed styles, bending outwards at the top. The stigmata, or openings on the top of the styles, are downy, and placed lengthways along the upper part of each style.

PERICARPIUM, or seed-vessel, consists of twelve, oftner thirteen, little pods, or capsules, that ripen. These are of a compressed oval shape, and a hard leather-like substance, with two valves to each, and are disposed edge-ways in a circular order, like so many rays of a star.

SEMINA. The seeds are smooth and shining, of an oval shape, a little compressed, and appear obliquely cut off at the base. There is one seed in each capsule. I am,

Sir,

Your affectionate friend,

John Ellis.

Illicium Floridanum Vulgo Starry Aniseed Tree.



EXPLANATION of PLATE XII.

- A A branch of the *Illicium Floridanum*, drawn from a plant in her Royal Highness the Princess Dowager of Wales's garden at Kew. The flowers and seed-vessels were drawn from specimens sent over from Pensacola by his honour lieutenant governor Durnford.
- BB The front view of two flowers.
- C The back view of a flower.
- D The bud of a flower unopened.
- EEE The pistilla, or female organs, being the embryo seed-vessel, separated from the stamina, or male organs.
- F One single pistillum, with the germen, style, and stigma.
- G The male and female organs, a little magnified.
- H Two stamina, a little magnified.
- I The farina foecundans or male dust.
- K K The calyx, with five little leaves.
- L L The seed-vessels, with thirteen capsules.
- L l The seed-vessel of the Chinese *Illicium*, with only eight capsules. Kæmpfer reckons the same number in the Japanese *Illicium*, which he calls *Somo*, or *Skimmi*.
- M Two of the seeds; they are called semen badian, and used in medicine in Germany, Denmark, and Sweden. The Dutch import large quantities of them from China.